REMARKS

The foregoing amendments and the following remarks are responsive to the Office Action mailed February 10, 2005. Applicants respectfully request reconsideration of the present application. Claims 1-59 were examined. No claims have been amended, added, or canceled. Therefore, claims 1-59 are presented for examination.

Summary of the Office Action

Examiner rejected claims 1-13, 17-22, 28-35 and 57-59 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,067,383 issued to Taniguchi, et al. in view of U.S. Patent No. 6,546,143 issued to Taubman, et al.

Examiner rejected claims 14-16 under 35 U.S.C. §103(a) as being unpatentable over Taniguchi, et al. in view of Taubman, et al., as applied to claim one and in further view of U.S. Patent No. 5,761,655 issued to Hoffman.

Examiner rejected claims 23 and 24 under 35 U.S.C. §103(a) as being unpatentable over Taniguchi, et al. in view of Taubman, et al., and in further view of U.S. Patent No. 5,880,856 issued to Ferriere.

Examiner rejected claims 25-27 under 35 U.S.C. §103(a) as being unpatentable over Taniguchi, et al. in view of Taubman, et al., Ferriere, and in further view of U. S. Patent No. 6,615,224 issued to Davis.

Examiner rejected claims 36-46 under 35 U.S.C. §103(a) as being unpatentable over Taubman, et al. in view of Taniguchi, and in further view of Davis.

Examiner rejected claims 47, 49, 51, and 52 under 35 U.S.C. §103(a) as being unpatentable over Taniguchi, et al. in view of Ferriere, in view of Taubman and in further view of Davis.

Examiner rejected claim 48 under 35 U.S.C. §103(a) as being unpatentable over Taniguchi, et al. in view of Ferriere, Davis, and further in view of Hoffman.

Examiner rejected claim 50 under 35 U.S.C. §103(a) as being unpatentable over Taniguchi, et al. in view of Ferriere, Davis, and further in view of U.S. Patent Publication No. 2001/0049693 issued to Pratt.

Examiner rejected claims 53-55 under 35 U.S.C. §103(a) as being being unpatentable over Taniguchi, et al. in view of Taubman, et al.

Examiner rejected claim 56 under 35 U.S.C. §103(a) as being unpatentable over Taniguchi, et al., Taubman, et al., Ferriere in view of Davis.

Response to §103 rejection of claims 1-13, 17-22, 28-35, and 57-59

Taniguchi discloses a coding process including designating an original image, designating a color separation means for separating the original image into a plurality of color components, designating a wavelet transform means for wavelet-transforming the color-separated image data designating a quantization means for quantizing the transformed data, designating a variable-length coding means for variable-length coding of the quantized data designating a priority judge means for deciding the priority for storage of the variable-length codes, and designating a code storage means for storing the variable-length codes according to the priority. (Taniguchi, col. 11, ll. 45-61.)

The Office action admits that Taniguchi fails to disclose or suggest "transforming each of the planes into separate bands, based on frequency information present in each plane, **wherein the separate bands include a first band with a first number of bitplanes**" and "**a plurality of layers suitable for progressive transmission to a target device, wherein a layer includes a subset of the bitplanes of the first band,**" as recited in claim 1. (Office Action, page 4.) The Office action combines Taniguchi with Taubman to show these elements.

Taubman discusses Wavelet transforms that may be used to perform subband decomposition and produce coefficients that describe the data in a hierarchical multiscale representation (Taubman, 1: 21-24.)

In particular, the Office action cites "embedded bitstreams" to show "a plurality of layers suitable for progressive transmission to a target device." However, in Taubman **a single embedded bitstream represents a single image** (Taubman, 1: 35-40). In contrast, claim 1 recites **a plurality of layers** that represent image data for a single image (claim 1 recites capturing an image, separating the image data into color planes, transforming the planes into separate bands, and organizing the bands into a plurality of layers). Because a single embedded bitstream is used to transmit data for a single image in Taubman, multiple embedded bitstreams are used in Taubman to transmit data for multiple images. Thus, because *multiple embedded bitstreams* in Taubman

are not equivalent to **a plurality of layers** recited in claim 1, Taubman fails to teach or suggest "**a plurality of layers suitable for progressive transmission to a target device, wherein a layer includes a subset of the bitplanes of the first band**," as recited in claim 1.

An embedded bitstream in Taubman comprises transform coefficients that are ordered in a hierarchical structure (Taubman, 1: 35-37). Taubman discloses that if, for some reason, an embedded bitstream is *truncated during transmission* of image data, the information already transmitted allows an entire image to be reconstructed. (Taubman, 1: 40-43). A scenario where an embedded bitstream gets *truncated during transmission* is different from a scenario that includes "**organizing the bands into a plurality of layers** ... wherein a layer includes a subset of the bitplanes of the first band" first and only then, "upon connection of the first device to a second device, transmitting a selected one of said plurality of layers from the first device to the second device," as recited in claim 1.

Because the combination of Taniguchi and Taubman fails to disclose or suggest each and every element of claim 1, claim 1 and its dependent claims 2-13, 17-22, 28-35, and 57-59 are patentable over the combination of Taniguchi and Taubman.

Response to §103 rejection of claims 14-16

Hoffman discloses a system that creates, stores, retrieves and displays thumbnail images. (Hoffman, Abstract.) Hoffman does not teach or suggest transforming each of the planes into separate bands at all. Therefore, whether considered separately or in combination with Taniguchi and Taubman, Hoffman fails to teach or suggest a method including "transforming each of the planes into separate bands, based on frequency information present in each plane, **wherein the separate bands include a first band with a first number of bitplanes**" and "**organizing the bands into a plurality of layers suitable for progressive transmission to a target device, wherein a layer includes a subset of the bitplanes of the first band**," as recited in claim 1. Claims 14-16 include these limitations by virtue of being dependent on claim 1. Therefore, claims 14-16 are patentable over the combination of Hoffman, Taniguchi, and Taubman.

Response to §103 rejection of claims 23 and 24

Ferriere discloses a method of storing and of progressively transferring a still image so that it can be conveniently previewed during the transfer and so that a user can terminate the transfer at an early stage if the image turns out to be undesirable. (Ferriere, Abstract.) Ferriere does not teach or suggest organizing bands into a plurality of layers. Therefore, Ferriere, whether considered separately or in combination with Taniguchi and Taubman, fails to disclose or suggest a method including "transforming each of the planes into separate bands, based on frequency information present in each plane, **wherein the separate bands include a first band with a first number of bitplanes**" and "**organizing the bands into a plurality of layers suitable for progressive transmission to a target device, wherein a layer includes a subset of the bitplanes of the first band**," as recited in claim 1. Claims 23 and 24 include these limitations by virtue of being dependent on claim 1. Therefore, claims 23 and 24 are patentable over the combination of Frriere, Taniguchi, and Taubman.

Response to §103 rejection of claims 25-27

Davis discloses a method for deleting files on a UNIX file system, so that they may subsequently be undeleted, without any possibility of loss or damage. (Davis, Abstract.) Davis does not teach or suggest the use of bitplanes or organizing bands into layers. Therefore, Davis, whether considered separately or in combination with Taniguchi, Taubman, and Ferriere, fail to disclose or suggest a method including "transforming each of the planes into separate bands, based on frequency information present in each plane, **wherein the separate bands include a first band with a first number of bitplanes**" and "**organizing the bands into a plurality of layers suitable for progressive transmission to a target device, wherein a layer includes a subset of the bitplanes of the first band**," as recited in claim 1. Claims 25-27 include these limitations by virtue of being dependent on claim 1. Therefore, claims 25-27 are patentable over the combination of Davis, Taniguchi, Taubman, and Ferriere.

Response to §103 rejection of claims 36-46

Claim 36 recites "transforming the color planes into **a plurality of bands, each band from the plurality of bands including a plurality of** bitplanes; partitioning said

image information at the source device into a plurality of layers, based on resolution and quality criteria, wherein **a layer includes at least a subset of bitplanes from two bands from the plurality of bands**."

As discussed with respect to claim 1, the combination of Taubman and Taniguchi fails to disclose or suggest these features. Davis is not concerned with transforming or partitioning image information. Thus, the combination of Taniguchi, Taubman, and Davis fails to disclose or suggest the features of claim 36. Claims 37-46 include these limitations by virtue of being dependent on claim 36. Therefore, claim 36 and its dependent claims 37-46 are patentable over the combination of Taniguchi, Taubman, and Davis.

Response to §103 rejection of claims 47, 49, 51, 52

Claim 47 recites "successive layers, wherein a layer includes a subset of the bitplanes of the first band." As discussed above, Taniguchi, Taubman, Ferriere, and Davis fail to disclose or suggest this feature, whether considered separately or in the combination. Therefore, claim 47 and its dependent claims 49, 51, and 52 are patentable over the combination of Taniguchi, Taubman, Ferriere, and Davis.

Response to §103 rejection of claim 48

Claim 48 includes the feature of "successive layers, wherein a layer includes a subset of the bitplanes of the first band" by virtue of being dependent on claim 47. As discussed above, Taniguchi, Ferriere, Davis, and Hoffman fail to disclose or suggest this feature, whether considered separately or in the combination. Therefore, claim 48 is patentable over the combination of Taniguchi, Ferriere, Davis, and Hoffman.

Response to §103 rejection of claim 50

Claim 50 includes the feature of "successive layers, wherein a layer includes a subset of the bitplanes of the first band" by virtue of being dependent on claim 47. As discussed above, Taniguchi, Ferriere, and Davis fail to disclose or suggest this feature, whether considered separately or in the combination. Pratt is directed at an automated data processing system (Pratt, Abstract) and is not concerned with bands or layers

representing image data. Thus, claim 50 is patentable over the combination of Taniguchi, Ferriere, Davis, and Pratt.

Response to §103 rejection of claims 53-55

Claim 53 recites "a logic to partition the image data into **a plurality of layers**, wherein each of the plurality layers includes information that permits rendering of the entire image, the plurality of layers being additive to render the image at increasingly better qualities and wherein **a layer includes a subset of the bitplanes of the first band**." Thus, claim 53 and its dependent claims 54-55 are patentable over the combination of Taniguchi and Taubman for at least the reasons articulated with respect to claim 1.

Response to §103 rejection of claim 56

Claim 56 recites "a logic to partition the image data into **a plurality of layers**, wherein each of the plurality layers includes information that permits rendering of the entire image, the plurality of layers being additive to render the image at increasingly better qualities and wherein **a layer includes a subset of the bitplanes of the first band**" by virtue of being dependent on claim 53. As discussed above, Taniguchi, Taubman, Ferriere, and Davis fail to disclose or suggest this feature, whether considered separately or in the combination. Therefore, claim 56 is patentable over the combination of Taniguchi, Taubman, Ferriere, and Davis.

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully submit that all pending claims are in condition for allowance. Such allowance is respectfully requested.

If the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to contact Elena Dreszer at (408) 947-8200.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

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